

### REMARKS

In the Office Action mailed March 15, 2002, claims 1-15 were rejected. Claim 1, 5, 6, 7, and 12 were found to be unpatentable under 35 USC 102(b) as being anticipated by Nakamura et al., U.S. Patent No. 5,604,835 (hereinafter "Nakamura").

Claims 2, 4, 8, 13 and 14 were rejected under 35 USC 103(a) as being considered unpatentable over Nakamura in view of Kenney et al., U.S. Patent No. 6,311,004 (hereinafter "Kenney").

Claims 3, 9-11, and 15 were rejected under 35 USC 103 (a) as being considered unpatentable over Nakamura and Kenney in view of Lipscomb et al., U.S. Patent No 4,879,318 (hereinafter "Lipscomb").

Applicant has canceled claims 5-15, without prejudice, and has amended claim 1. Claims 16-25 have been added.

In the Office Action mailed March 15, 2002, claims 1, 5, 6, 7, and 12 were found to be unpatentable under 35 USC 102(b) as being anticipated by Nakamura. Nakamura shows a trench formed in a substrate. However, the trench does not extend all the way through the substrate.

\* Applicant has amended claim 1 to make it more clear that the via has a hole that "extends from one side of the substrate to an opposite side of the substrate". A via extending from one side of the substrate to an opposite side of the substrate allows for a different system architecture than one that has a via that merely extends to devices buried within the substrate. For example, a via that extends from one side of a substrate to an opposite side of the substrate allows for devices to be mounted on both sides of the substrate.

Applicant has added language similar to that of amended claim 1 to new independent claim 23. Claims 5, 6, 7 and 12 were canceled. Applicant respectfully submits that claims 1 and 23 are now allowable under 35 U.S.C. 102(b) over Nakamura. Because claims 2-4, 16-22 depend from claim 1, and claims 24-25 depend from claim 23, Applicant submits that claims 2-4, 16-22 and 24-25 are also now allowable.

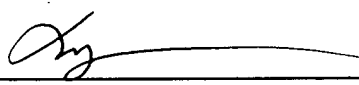
In the Office Action mailed March 15, 2002, claims 2, 4, 8, 13 and 14 were rejected under 35 USC 103(a) as being considered unpatentable over Nakamura in view of Kenney. As previously discussed, claims 2 and 4 depend upon amended claim 1, and Applicant submits are now allowable. Additionally, it would not have been obvious to combine Nakamura and Kenney to arrive at the invention as claimed by claims 2 and 4. Kenney describes an array waveguide grating, a structure that lies in the plane of the substrate. It is a significantly different structure than that of claims 2 and 4. Claims 8, 13, and 14 have been canceled, without prejudice.

Claims 3, 9-11, and 15 were rejected under 35 USC 103 (a) as being considered unpatentable over Nakamura and Kenney in view of Lipscomb. As previous discussed, claim 3 depends upon amended claim 1, and Applicant submits that claim 3 is now allowable. Applicant further submits, that it would not have been obvious to combine Nakamura, Kenney and Lipscomb to arrive at the invention of claim 3, because the references are technically disparate. Lipscomb discusses using a mold to form a lens for eyeglasses and the like. Lipscomb does not discuss forming a lens on a substrate, or with reference to a waveguide. Claims 9-11, and 15 have been canceled without prejudice.

If there are any additional charges, please charge them to our Deposit Account Number 02-2666.

Respectfully submitted,  
BLAKELY, SOKOLOFF, TAYLOR & ZAFMAN LLP

Dated: 8/14/02

  
Michael J. Mallie, Reg. No. 36,591

12400 Wilshire Blvd.  
Seventh Floor  
Los Angeles, CA 90025-1026  
(408) 720-8300

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Name:   
Melanie Lyons

**VERSION WITH MARKINGS TO SHOW CHANGES MADE**

**In the Claims:**

Claim 1 has been amended as follows:

1. (Amended) A method of making a photonic via comprising:
  - making a hole in a substrate[;], wherein the hole extends from one side of the
  - substrate to an opposite side of the substrate;
  - depositing a cladding material into the hole;
  - depositing an optical core material into the hole.